



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,248	09/11/2003	Chao-Ming Huang	3313-1030P	3554
2292	7590	05/02/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			JONES, CRYSTAL L	
			ART UNIT	PAPER NUMBER
			2627	

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/659,248	Applicant(s) HUANG ET AL.	
	Examiner Crystal Jones	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 11-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-10, drawn to a track jump apparatus, classified in class 369, subclass 44.28.
 - II. Claims 11-13, drawn to a position detection method, classified in class 369, subclass 53.28.

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such as one comprising a step of outputting a position error signal according to a single, detected servo signal.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Joe Muncy on April 19, 2006 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-10. Affirmation of this election must be made by applicant in replying to this Office action. Claims 11-13 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one

Art Unit: 2627

or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahara et al. (U.S. Patent 5,566,148).

Regarding claim 1, Takahara et al. disclose a track jump apparatus (Fig. 4) for accessing an optical storage medium (Fig. 4, element 1), which is applied for controlling track cross velocity and track position, comprising: an actuator unit (Fig. 4, element 31) for moving an objective lens in an optical pickup head which changes the position of light spot emitted from laser diode in the optical pickup head onto data tracks of the optical storage medium, thereby generating information corresponding to the data tracks; a pre-amplifier for generating a tracking error signal and a focus sum signal according to the information corresponding to the data tracks (Fig. 4, elements 12, 42, and 43); a micro processor for providing a track jump command (Fig. 4, element 23); and a position control unit (Fig. 4, elements 16 and 35) electrically coupled to the pre-amplifier and the micro processor, wherein when the position control unit does not receive the jump command, the laser spot output from the objective lens in the optical pickup head is positioned at the current track and the position control unit receives the tracking error signal in order to produce a control signal to control the position of the

Art Unit: 2627

laser spot (Col. 7, lines 39-51), and when the position control unit receives the jump command, the laser spot output from objective lens in optical pickup head moves from the current track to a object track, and the position control unit receives the tracking error signal and the focus sum signal (Col. 8, lines 25-28) to generate a control signal to control the track cross velocity and the position of the laser spot by means of actuator unit (Specification, page 1, lines 21-24).

Regarding claim 2, Takahara et al. disclose the track jump apparatus of claim 1, wherein the actuator unit is controlled by electric current (Col. 7, lines 52-59).

Regarding claim 3, Takahara et al. disclose the track jump apparatus of claim 2, wherein the track jump apparatus further comprises an actuator driver for transforming the control signal from voltage type to current type (Col. 7, lines 52-59).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahara et al. (U.S. Patent 5,566,148) in view of Takahashi et al (U.S. Patent 6,442,111).

Regarding claim 4, Takahara et al. discloses the track jump apparatus of claim 1 above but fail to disclose the components of the position control unit.

Takahashi et al. disclose the position control unit comprising: a hybrid track position detector for delivering a hybrid track position signal (Fig. 15, output of element

Art Unit: 2627

23) and an area changeover signal according to the tracking error signal and the focus sum signal (Col. 18, lines 38-51); a position accumulator for computing the current accumulated hybrid track positions according to the hybrid track position signal and the area changeover signal (Fig. 15, output of element 29), thereby delivering an accumulated hybrid track position signal; a position profile generator and pull-in detector for generating an object position command signal and a pull-in signal according to the track jump command (Fig. 15, output of element 32), wherein the object position command signal and the pull-in signal are necessary for moving the light spots of the laser beam from the current track to the object track; a subtractor (Fig. 15, element 34) for delivering a position error signal (Deviation Relative) according to the accumulated hybrid track position signal and the object position command signal; and a switching unit (Fig. 15, element 14) for receiving the tracking error signal or the position error signal according to the voltage level of the pull-in signal.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the track jump apparatus of Takahara et al. with the position control unit of Takahashi et al.

Motivation for such combination is to stabilize a track jump (Takahashi et al., Col. 3, lines 36-41).

Regarding claim 5, Takahara et al. disclose the track jump apparatus of claim 1 above but fail to disclose the components of the position control unit.

Takahashi et al. disclose the position control unit further comprising a compensator for delivering the control signal to the actuator driver (Fig. 15, element 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the track jump apparatus of Takahara et al. with the position control unit of Takahashi et al.

Motivation for such combination is to stabilize a track jump (Takahashi et al., Col. 3, lines 36-41).

Allowable Subject Matter

3. Claims 6-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 6 and 10, no reference alone or in combination discloses delivering the hybrid track position signal and the area changeover signal according to a normalized tracking error and focus sum signal.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamashita et al. (U.S. Patent 5,933,397).

Yamashita et al. disclose a track jump apparatus which is applied for controlling track cross velocity and track position but fail to disclose a position control unit as claimed.

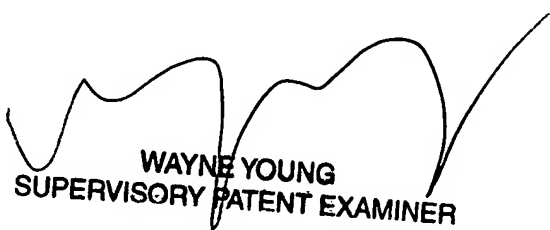
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal Jones whose telephone number is 571-272-2849. The examiner can normally be reached on Monday through Friday, 8:30 a.m. to 6 p.m..

Art Unit: 2627

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CJ


WAYNE YOUNG
SUPERVISORY PATENT EXAMINER